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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/659,129

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David G. Therrien

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EXAMINER

ADAMS, CHARLES D

ART UNIT

PAPER NUMBER

2164

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/659,129

Applicant(s)

THERRIEN ET AL.

Examiner

Charles D. Adams

Art Unit

2164

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5-19-04 & 5-27-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "input/output activity" in line 3. For the purposes of examination, this was interpreted to mean "input or output".

Claim 3 recites the limitation "the replication of files" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitations "the creation of a second version of the first file" in lines 2-3 and "the difference between the first version and the second version" in line 6. There is insufficient antecedent basis for these limitations in the claim.

Claim 11 recites the limitations "the share" in line 2, "the location of repositories" in line 4 and "the number of replicas" in line 4-5. There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2164

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 7-10 and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Parker et al. (US Patent 6,847,982).

As to claim 7, Parker et al. teaches:

Storing a version of a first file within a set of files on a primary disk storage system (see 7:24-35);

Examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files (see 7:24-35 and 8:17-25);

Replicating the version of the first file to repositories specified by the protection policy, the specified repositories including at least one local repository and at least one remote repository (see 7:44-67).

As to claim 8, Parker et al. teaches wherein the version of the first file is the first version (see 8:17-25. New files can be created).

As to claim 9, Parker et al. teaches applying reverse delta compression to successive versions of the first file as new versions are stored in the repositories (see 9:54-10:4);

As to claim 10, Parker et al. teaches wherein applying reverse delta compressions to successive version of the first file comprises in response to the creation of a second version of the first file:

Replacing the first version of the first file replicated in the local repository with a reverse delta compressed version representing the difference between the first version and the second version and replicating the second version in the local repository (see 9:54-10:4)

Transmitting a difference file to the remote repository (see 17:18-26. The Vault transmits client information, which is a difference file);

In the remote repository, applying the difference file to the previous version of the file (see 17:18-26. The Client database is updated with the client file information) to store the second version and a reverse delta compressed version representing the difference between the first file version and the second version (see 17:18-26 and 6:42-59. A reverse delta can be sent with the data with the shipping container as well as a forward delta).

As to claim 14, Parker et al. teaches wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

Determining a specified backup frequency (see 8:17-25 and 9:6-11).

As to claim 15, Parker et al. teaches wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

Determining a specified type of compression (see 6:42-59. A reverse delta can be chosen along with a forward delta to send to the library).

As to claim 16, Parker et al. teaches wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

Determining a specified caching level (see 9:12-14. A storing (caching) frequency level is determined and chosen).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 6 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dion et al. (US Patent 6,163,856) in view of Whiting et al. (US Patent 5,778,395).

As to claim 1, Dion et al. teaches a filter driver operative to intercept input/output activity initiated by client file requests and to maintain a list of modified and created files since a prior backup (see 9:37-55);

A file system in communication with the filter driver and operative to store client files (see 9:1-22 and 9:49-55);

Dion et al. does not teach a policy cache operative to store a protection policy associated with a set of files;

Whiting et al. teaches a policy cache operative to store a protection policy associated with a set of files (see 7:59-8:20);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dion et al. by the teaching of Whiting et al., since Whiting et al. teaches that "the present invention provides a lower-cost backup solution that simultaneously reduces network band-width consumption, decreases the time required for backup and restore, allows for central administration, automates the backup process at user workstations, provides access to all versions of previous files without any administrator intervention, and permits the user to access files from the backup directly using his own applications" (see 4:62-5:2).

Dion et al. as modified teaches a mirror service in communication with the filter driver and with the policy cache, the mirror service operative to prepare modified and created files in the set of files to be written to a repository as specified in the protection policy associated with the set of files (see Whiting et al. 7:59-8:20);

A fileserver API coupled to the mirror service and operative to communicate with a repository (see Whiting et al. 7:59-8:20 and Dion et al. 9:37-55);

A fileserver file transfer module in communication with the file system and operative to transfer files from the file system to at least one repository (see Whiting et al. 7:59-8:20).

As to claim 2, Dion et al. as modified teaches wherein the mirror service directs new versions of an existing file to the repository to which prior versions of the file were written (see Whiting et al. 7:59-8:20. Each modified file is updated to a user directory, which is where the previous version was written).

As to claim 6, Dion et al. as modified teaches wherein the protection cache is operative to define which repositories are used (see Whiting et al. 7:59-8:20), how often data protection occurs (see Whiting et al. 33:49-51. How often the Agent runs can be changed), how many replicas are maintained within each repository (see Whiting et al. 8:16-20, only one replica of each file. If there is more than one replica in the system, then a pointer is used to refer to the file to save space), and how modifications to share data are maintained (see Dion et al. 15:1-8. The servers can be configured to share data with different degrees of coherency).

As to claim 17, Dion et al. teaches:

A fileserver having:



Filter driver means for intercepting input/output activity initiated by client file requests and for maintaining a list of modified and created files since a prior backup (see 9:37-55);

File system means in communication with the filter driver, the file system means for storing client files (see 9:1-22 and 9:49-55);

Dion et al. does not teach policy cache means for storing a protection policy associated with a set of files;

Whiting et al. teaches policy cache means for storing a protection policy associated with a set of files (see 7:59-8:20);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dion et al. by the teaching of Whiting et al., since Whiting et al. teaches that "the present invention provides a lower-cost backup solution that simultaneously reduces network band-width consumption, decreases the time required for backup and restore, allows for central administration, automates the backup process at user workstations, provides access to all versions of previous files without any administrator intervention, and permits the user to access files from the backup directly using his own applications" (see 4:62-5:2).

Dion et al. as modified teaches mirror service means in communication with the filter driver means and with the policy cache means, the mirror service means for preparing modified and created files in the set of files to be written to a repository as specified in the protection policy associated with the set of files (see Whiting et al. 7:59-8:20).

As to claim 18, Dion et al. as modified teaches:

A fileserver API coupled to the mirror service means and operative to communicate with a repository (see Whiting et al. 7:59-8:20 and Dion et al. 9:37-55);  
and

A fileserver file transfer module in communication with the file system means and operative to transfer files from the file system to at least one repository (see Whiting et al. 7:59-8:20).

7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dion et al. (US Patent 6,163,856) in view of Whiting et al. (US Patent 5,778,395), and further in view of Belknap et al. (US Pre-Grant Publication 2003/0070001).

As to claim 3, Dion et al. teaches the system of claim 1.

Dion et al. does not teach a location cache in communication with the mirror service and operative to indicate which repository should receive an updated version of an existing file;

Belknap et al. teaches a location cache in communication with the mirror service and operative to indicate which repository should receive an updated version of an existing file (see paragraphs [0063]-[0064]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Dion et al. by the teaching of

Belknap et al., since Belknap et al. teaches “to provide a common interface to media servers which conceals the media server specific device commands from applications which interact with the media servers included within the system” (see paragraph [0006]).

Dion et al. as modified teaches a location manager coupled to the location cache and operative to update the location cache when the system writes a new file to a specific repository node (see Belknap et al. paragraph [0069]).

As to claim 4, Dion et al. as modified teaches:

A local repository having (see Whiting et al. 7:59-8:20. Whiting et al. transfers items from a local database to a remote one):

A local repository node API adapted for communicating with the fileserver API (see Whiting et al. 7:59-8:20);

A local repository file transfer module in communication with the fileserver file transfer module and adapted for receiving files from the fileserver file transfer module (see Whiting et al. 7:59-8:20);

A data mover in communication with the local repository API and operative to supervise the replication of files from the fileserver to the local repository (see Whiting et al. 7:59-8:20); and

A protection policy component in communication with the data mover and operative to determine whether new versions of existing files should be compressed

and whether older versions of existing files should be maintained (see Whiting et al. 7:59-8:20 and 34:24-36).

As to claim 5, Dion et al. as modified teaches:

A remote repository having (see Dion et al. 9:1-36):

A remote repository node API adapted for communicating with the local repository API (see Dion et al. 9:1-36);

A remote repository file transfer module in communication with the local file transfer module and adapted for receiving files from the local file transfer module (see Dion et al. 9:37-55);

A data mover in communication with the remote repository API and operative to supervise the replication of files from the local repository to the remote repository (see Dion et al. 9:37-55); and

A protection policy component in communication with the data mover and operative to determine whether new versions of existing files should be compressed and whether older versions of existing files should be maintained (see Whiting et al. 7:59-8:20 and 34:24-36).

8. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (US Patent 6,847,982) in view of Santry et al. ("Deciding when to forget in the Elephant file system").

As to claim 11, Parker et al. teaches wherein examining a protection policy associated with the share to determine where and how to protect files associated with the set of files comprises:

Determining the location of repositories (see Parker et al. 10:36-55)

Parker et al. does not teach and the number of replicas for each repository.

Santry et al. teaches the number of replicas for each repository (see page 113, section 3.3. Only one version is kept).

Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to have modified Parker et al. by the teaching of Santry et al., since Santry et al. teaches that "old versions of files are automatically retained and storage is managed by the file system. Users specify retention policies for individual files, groups of files, or directories. The goal of Elephant is to allow users to retain important old versions of all of their files. User actions such as delete and file write are thus easily revocable by rolling back a file system, a directory, or an individual file to an earlier point in time" (see page 111, last paragraph of section 1).

As to claim 12, Parker et al. teaches the method of claim 7.

Parker et al. does not teach wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

Determining whether to purge a file from repositories after the file has been deleted from a set of files.

Santry et al. teaches wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

Determining whether to purge a file from repositories after the file has been deleted from a set of files (see page 113, section 3.5 and 115, section 4.2.3 (it is determined whether a file should be deleted)).

As to claim 13, Parker et al. teaches the method of claim 7.

Parker et al. does not teach wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

Determining whether to keep version histories (see page 113, section 3.2).

### ***Conclusion***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Adams whose telephone number is (571) 272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2164

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles Adams  
AU 2164



**SAM RIMELL**  
**PRIMARY EXAMINER**